

COMPUTER AIDED DESIGN SYSTEM AND COMPUTER AIDED DESIGN PROGRAM
USING A GEOMETRIC SURFACE MODEL

BACKGROUND OF THE INVENTION

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TECHNICAL FIELD

The present invention relates to a computer aided design system and a computer aided design program which transform the shape of a member into an objective curved surface shape.

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BACKGROUND ART

Today, there is a desire to shorten processes from planning to design and production to respond to consumer demand. In order to improve the efficiency of design and production processes, the use of CG (Computer Graphics) and CAD (Computer Aided Design) systems is popular. In order to depict shapes having complex curved lines or curved surface shapes, such as for motor vehicles, domestic electric appliances, or the like, on a computer, the following processing methods have conventionally been used.

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The first method is solid modeling, where simple shapes called primitives are held in a computer, and operations to combine the shapes with each other are repeated in order to express complex shapes. A primitive is for example a column, a cube, a hexahedron, a torus, a ball, or the like, and in solid modeling shapes are represented by set operations on these primitives. Therefore, in order to produce a complex

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